

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**INVENTORS:** James Agutter  
Dwayne R. Westenskow  
Noah Syroid  
Julio C. Bermudez  
Yinqi Zhang

ASSIGNEE: University of Utah

SERIAL NUMBER: n/a

DATE FILED: n/a

TITLE: METHOD AND APPARATUS FOR MONITORING DYNAMIC  
CARDIOVASCULAR FUNCTION USING N-DIMENSIONAL  
REPRESENTATIONS OF CRITICAL FUNCTIONS

ATTORNEY DOCKET: 4315 P

Assistant Commissioner for Patents  
Box PATENT APPLICATION  
Washington, DC 20231

## VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS

**--INDEPENDENT INVENTOR--  
(37 CFR 1.9(c), (f) and 1.27(b))**

Honorable Assistant Commissioner:

As the below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR § 1.9(c) for the purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled **METHOD AND APPARATUS FOR MONITORING DYNAMIC CARDIOVASCULAR FUNCTION USING N-DIMENSIONAL REPRESENTATIONS OF CRITICAL FUNCTIONS** described in a patent application filed herewith.

I have not assigned, granted, conveyed or licensed and I am not under any obligation under contract or law to assign, grant, convey or license any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR § 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR § 1.9(d) or a nonprofit organization under 37 CFR § 1.9(e).

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the due date on which status as a small entity is no longer appropriate. (37 CFR § 1.28(b)).

I hereby declare that all statements made herein are of my own knowledge and are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Signature of Inventor: \_\_\_\_\_

Name of Inventor: James Agutter

Date: \_\_\_\_\_

Signature of Inventor: \_\_\_\_\_

Name of Inventor: Dwayne R. Westenskow

Date: \_\_\_\_\_

Signature of Inventor: \_\_\_\_\_

Name of Inventor: Noah Syroid

Date: \_\_\_\_\_

Signature of Inventor: \_\_\_\_\_

Name of Inventor: Julio C. Bermudez


Date: \_\_\_\_\_

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Yinqi Zhang

\_\_\_\_\_

  
Lloyd W. Sadler (Reg. No. 40,154)

**CONFIDENTIAL**

**INVENTORS:** James Agutter  
Dwayne R. Westenskow  
Noah Syroid  
Julio C. Bermudez  
Yinqi Zhang

**ASSIGNEE:** University of Utah

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**--SMALL BUSINESS CONCERN--**  
**(37 CFR 1.9(f) AND 1.27(c))**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:
- ☒ an official of the small business concern identified below and that I am empowered to act on behalf of said corporation:

NAME OF CONCERN: University of Utah

ADDRESS OF CONCERN: 421 Wakara Way, Suite 170  
Salt Lake City, Utah 84108

I hereby declare that the above organization qualifies as a nonprofit organization as defined in 37 CFR § 1.9(f) and § 1.27(d) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code in that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR § 1.9(e).

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled **METHOD AND APPARATUS FOR MONITORING DYNAMIC CARDIOVASCULAR FUNCTION USING N-DIMENSIONAL REPRESENTATIONS OF CRITICAL FUNCTIONS** by the above-named inventors described in

- ☒ the specification filed with this declaration.
- ☐ application Serial No. \_\_\_\_\_, filed \_\_\_\_\_.
- ☐ Patent No. \_\_\_\_\_, issued \_\_\_\_\_.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 CFR § 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR § 1.9(d), or a nonprofit organization under 37 CFR § 1.9(e).

- ☐ no such person, concern or organization exists.
- ☒ each such person, concern or organization is listed below:

NAME: University of Utah Research Foundation  
ADDRESS: 210 Park Building  
Salt Lake City, Utah 84112

- ☐ INDIVIDUAL
- ☐ SMALL BUSINESS ENTITY
- ☒ NONPROFIT ORGANIZATION

I acknowledge the duty of the small business concern to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the due date on which status as a small entity is no longer appropriate. (37 CFR § 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any

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patent issuing thereon, or any patent to which this verified statement is directed.


On Behalf of: University of Utah

NAME OF PERSON SIGNING: \_\_\_\_\_

TITLE OF PERSON SIGNING: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

At the time of filing this patent application, no officials of the University of Utah were available for endorsing this form. However, the attorney submitting this application, Lloyd W. Sadler, Reg. No. 40,154, has been verbally assured that the University of Utah qualifies for small entity status as a non-profit entity. The applicant intends to file a properly endorsed statement (declaration) of independent inventors – small entity status upon receipt of a Notice of Missing Parts. The applicants/inventors intend to execute an assignment to the University of Utah of their rights to this patent application and any ensuing patent as soon as they are available for endorsing such an assignment.

  
\_\_\_\_\_  
Lloyd W. Sadler (Reg. No. 40,154)

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I hereby declare that the above organization qualifies as a nonprofit organization as defined in 37 CFR § 1.9(f) and § 1.27(d) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code in that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR § 1.9(e).

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled **METHOD AND APPARATUS FOR MONITORING DYNAMIC CARDIOVASCULAR FUNCTION USING N-DIMENSIONAL REPRESENTATIONS OF CRITICAL FUNCTIONS** by the above-named inventors described in

- ☒ the specification filed with this declaration.
- ☐ application Serial No. \_\_\_\_\_, filed \_\_\_\_\_.
- ☐ Patent No. \_\_\_\_\_, issued \_\_\_\_\_.

If the rights held by the above-identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below and no rights to the invention are held by any person, other than the inventor, who could not qualify as an independent inventor under 37 CFR § 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR § 1.9(d), or a nonprofit organization under 37 CFR § 1.9(e).

- ☒ no such person, concern or organization exists.
- ☐ each such person, concern or organization is listed below:

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

- ☐ INDIVIDUAL
- ☐ SMALL BUSINESS ENTITY
- ☐ NONPROFIT ORGANIZATION

I acknowledge the duty of the small business concern to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the due date on which status as a small entity is no longer appropriate. (37 CFR § 1.28(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any


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TITLE OF PERSON SIGNING: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

At the time of filing this patent application, no officials of the University of Utah Research Foundation were available for endorsing this form. However, the attorney submitting this application, Lloyd W. Sadler, Reg. No. 40,154, has been verbally assured that the University of Utah Research Foundation qualifies for small entity status as a non-profit entity. The applicant intends to file a properly endorsed statement (declaration) of independent inventors – small entity status upon receipt of a Notice of Missing Parts. The University of Utah intends to execute an assignment to the University of Utah Research Foundation of its rights to this patent application and any ensuing patent as soon as they are available for endorsing such an assignment.

  
Lloyd W. Sadler (Reg. No. 40,154)

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ATTORNEY DOCKET: 4315 P

Assistant Commissioner for Patents  
Box PATENT APPLICATION  
Washington, DC 20231

**DECLARATION FOR PATENT APPLICATION**

Honorable Assistant Commissioner:

As the below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe that I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled **METHOD AND APPARATUS FOR MONITORING DYNAMIC CARDIOVASCULAR FUNCTION USING N-DIMENSIONAL REPRESENTATIONS OF CRITICAL FUNCTIONS** the specification of which is attached hereto.

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby appoint Lloyd W. Sadler (Reg. No. 40,154) and Daniel P. McCarthy (Reg. No.

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# THE 2000 ELECTION

Date: \_\_\_\_\_

Residence of inventor:

Post Office Address of inventor:

Inventor's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Residence of inventor:

Post Office Address of inventor:

Inventor's Signature: \_\_\_\_\_

**How do we know that the  
"new" is not just a  
repackaging of the old?**

Residence of inventor:

Address: 402 University Village  
City: Salt Lake City  
State: Utah  
Citizenship: People's Republic of China

Post Office Address of inventor:

Address: 402 University Village  
City: Salt Lake City  
State: Utah

Inventor's Signature: \_\_\_\_\_

Date: \_\_\_\_\_